



基礎雲端運算程式設計

A640900I_3B_邱郁涵





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題目

- 題目：請參考課本的觀念及老師給 MVC 簡易入口網站範例【MVC_BasePortal(MathLottery)_20180322】的之程式碼，建置一個你自己的入口網站，功能不能和老師給的範例一樣。
 - (1) 利用 ASP.NET MVC 建立網頁，入口網站除了首頁之外，還要有 2 個功能頁面(總共有 3 個操作介面)。都必須列在導覽列，以方便使用者操作。
 - (2) 必須利用 ViewModel 宣告的方式進行輸入欄位的驗證。注意 GUI 的美觀(字型、顏色、對齊方式、各元件之擺置位置等)。

實作結果

操作畫面

- Home



圖表 I

- BMI

作業一 首頁 BMI服務 進位服務

BMI運算

身高：	156
體重：	52
結果：	21.37

運算

圖表 2

- Carry

作業一 首頁 BMI服務 進位服務

進位運算

十進位數字：	89
二進位：	1011001
八進位：	131
十六進位：	59

運算

圖表 3



操作影片

- 有聲音_手機錄影

https://drive.google.com/open?id=1QpFHzphISLpjzT-4I-Vv2Lkulz_wl3RF

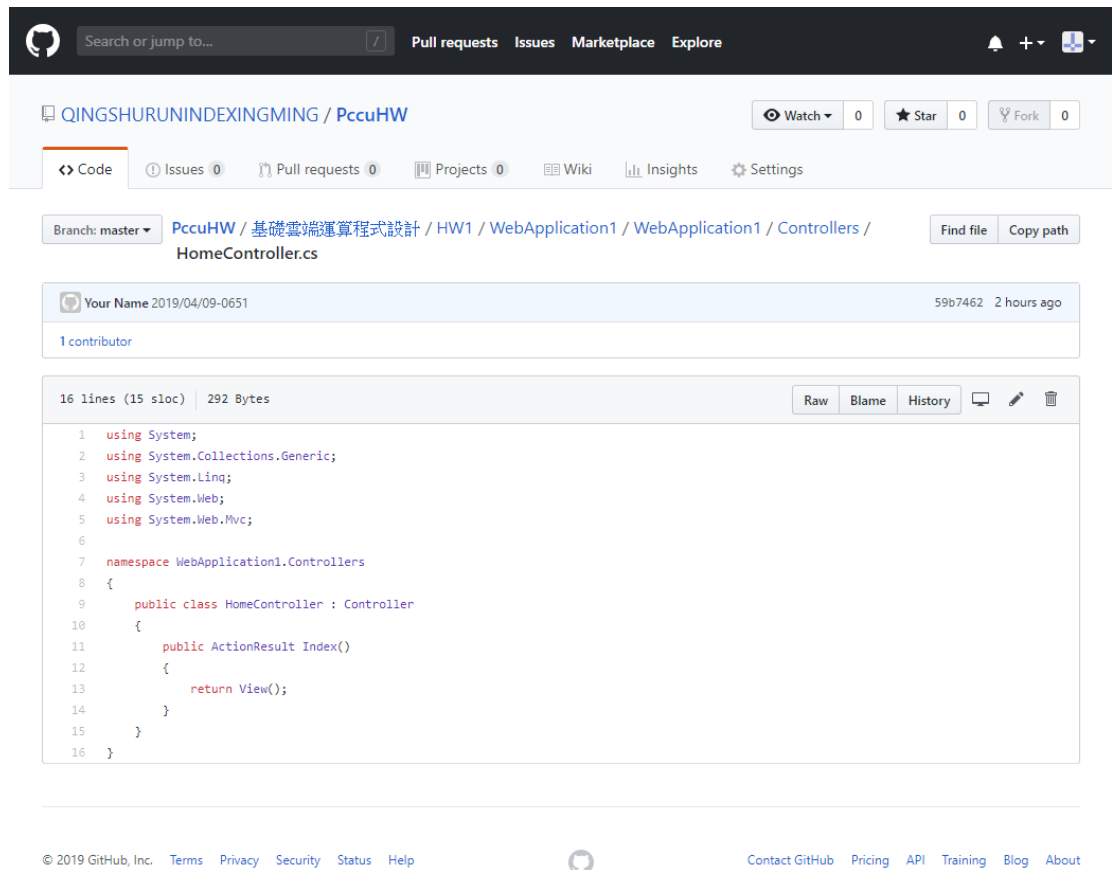
- 無聲音_電腦錄影

<https://drive.google.com/open?id=1rP9gGT87cdyaSoBjp31C-4t-BakftLY0>

程式碼

Controllers

- Home

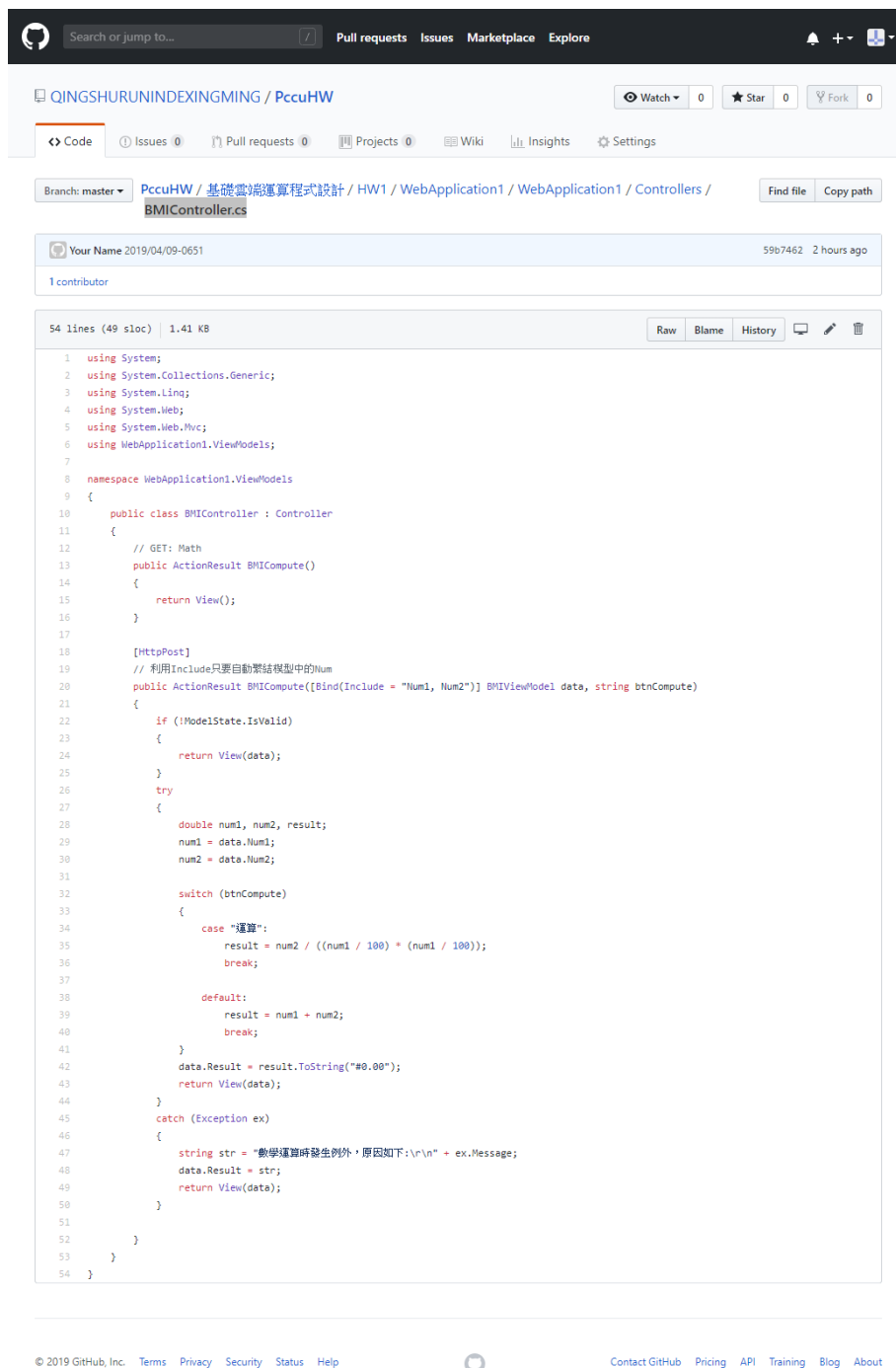


The screenshot displays a GitHub repository page for 'QINGSHURUNINDEXINGMING / PccuHW'. The repository has 0 Watchers, 0 Stars, and 0 Forks. The file path is 'Branch: master' > 'PccuHW / 基礎雲端運算程式設計 / HW1 / WebApplication1 / WebApplication1 / Controllers / HomeController.cs'. The commit is by 'Your Name' on 2019/04/09-0651, with a commit hash of 59b7462, made 2 hours ago. The code is 16 lines (15 sloc) and 292 Bytes. The code content is as follows:

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Web;
5 using System.Web.Mvc;
6
7 namespace WebApplication1.Controllers
8 {
9     public class HomeController : Controller
10     {
11         public ActionResult Index()
12         {
13             return View();
14         }
15     }
16 }
```

圖表 4

● BMI

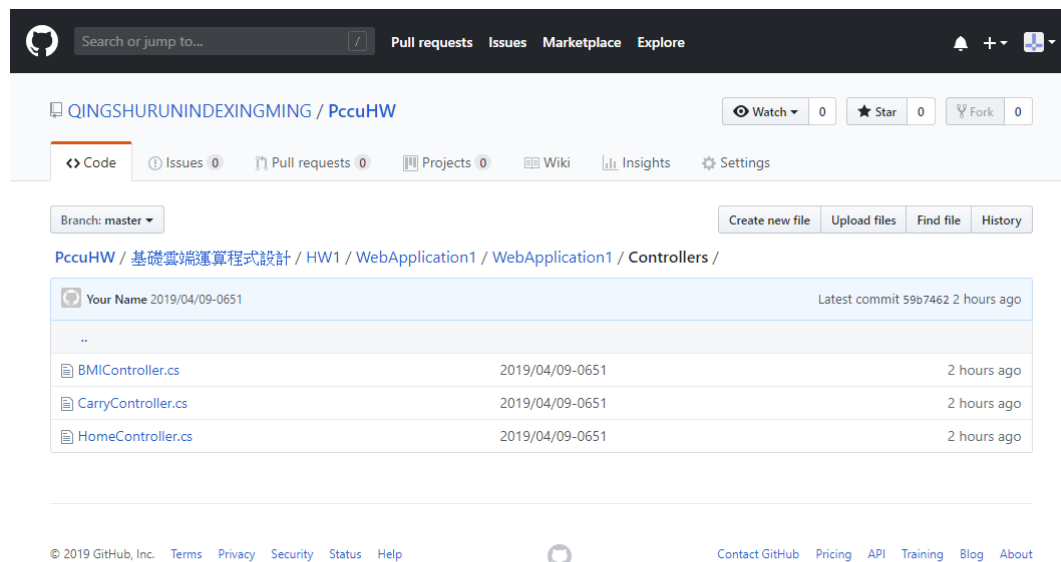


The screenshot displays a GitHub repository page for 'QINGSHURUNINDEXINGMING / PccuHW'. The file 'BMIController.cs' is selected, showing its code. The code is a C# controller for BMI calculation, featuring a GET method for basic calculation and a POST method for calculation with user input. It includes error handling for invalid model states and exceptions.

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Web;
5 using System.Web.Mvc;
6 using WebApplication1.ViewModels;
7
8 namespace WebApplication1.ViewModels
9 {
10     public class BMIController : Controller
11     {
12         // GET: Math
13         public ActionResult BMICompute()
14         {
15             return View();
16         }
17
18         [HttpPost]
19         // 利用Include只要自動繫結模型中的Num
20         public ActionResult BMICompute([Bind(Include = "Num1, Num2")] BMIViewModel data, string btnCompute)
21         {
22             if (!ModelState.IsValid)
23             {
24                 return View(data);
25             }
26             try
27             {
28                 double num1, num2, result;
29                 num1 = data.Num1;
30                 num2 = data.Num2;
31
32                 switch (btnCompute)
33                 {
34                     case "運算":
35                         result = num2 / ((num1 / 100) * (num1 / 100));
36                         break;
37
38                     default:
39                         result = num1 + num2;
40                         break;
41                 }
42                 data.Result = result.ToString("#0.00");
43                 return View(data);
44             }
45             catch (Exception ex)
46             {
47                 string str = "數學運算時發生例外，原因如下:\r\n" + ex.Message;
48                 data.Result = str;
49                 return View(data);
50             }
51         }
52     }
53 }
54 }
```

圖表 5

- Carry



圖表 6

ViewModels

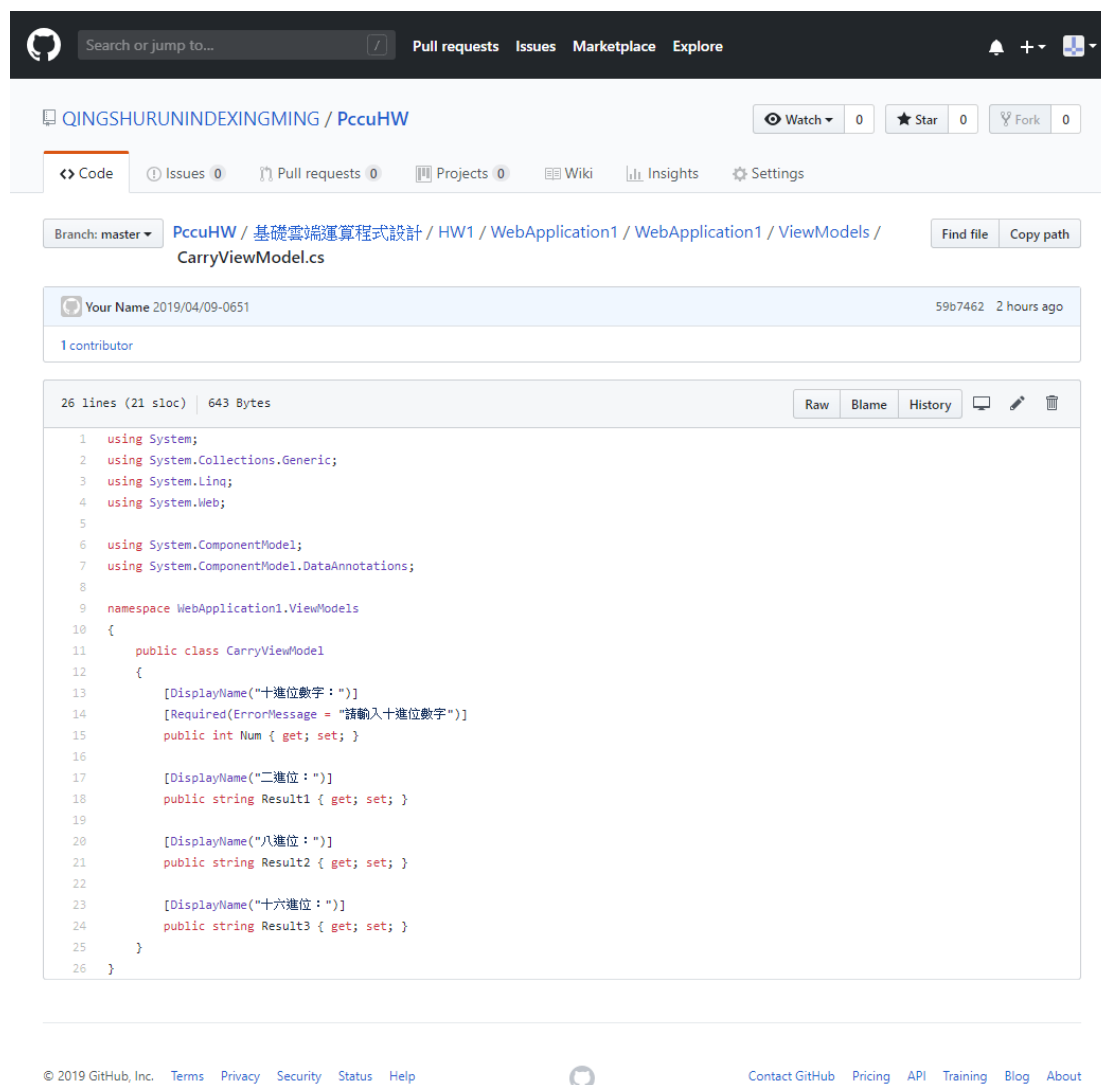
- BMIViewModel.cs

The screenshot displays a GitHub repository page for 'QINGSHURUNINDEXINGMING / PccuHW'. The file 'BMIViewModel.cs' is selected, showing its code. The code is a C# class for a ViewModel, including using statements for System, System.Collections.Generic, System.Linq, System.Web, System.ComponentModel, and System.ComponentModel.DataAnnotations. It defines a namespace 'WebApplication1.ViewModels' and a class 'BMIViewModel' with properties 'Num1' and 'Num2' (both double) and a 'Result' property (string). The code is 24 lines long (20 sloc) and 586 Bytes. The commit history shows 1 contributor, 'Your Name', on 2019/04/09-0651. The footer of the page includes copyright information for GitHub, Inc. and links to Terms, Privacy, Security, Status, Help, Contact GitHub, Pricing, API, Training, Blog, and About.

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Web;
5
6 using System.ComponentModel;
7 using System.ComponentModel.DataAnnotations;
8
9 namespace WebApplication1.ViewModels
10 {
11     public class BMIViewModel
12     {
13         [DisplayName("身高 :")]
14         [Required(ErrorMessage = "請輸入身高")]
15         public double Num1 { get; set; }
16
17         [DisplayName("體重 :")]
18         [Required(ErrorMessage = "請輸入體重")]
19         public double Num2 { get; set; }
20
21         [DisplayName("結 果 :")]
22         public string Result { get; set; }
23     }
24 }
```

圖表 7

- CarryViewModel.cs



QINGSHURUNINDEXINGMING / PccuHW

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Your Name 2019/04/09-0651 59b7462 2 hours ago

1 contributor

26 lines (21 sloc) 643 Bytes

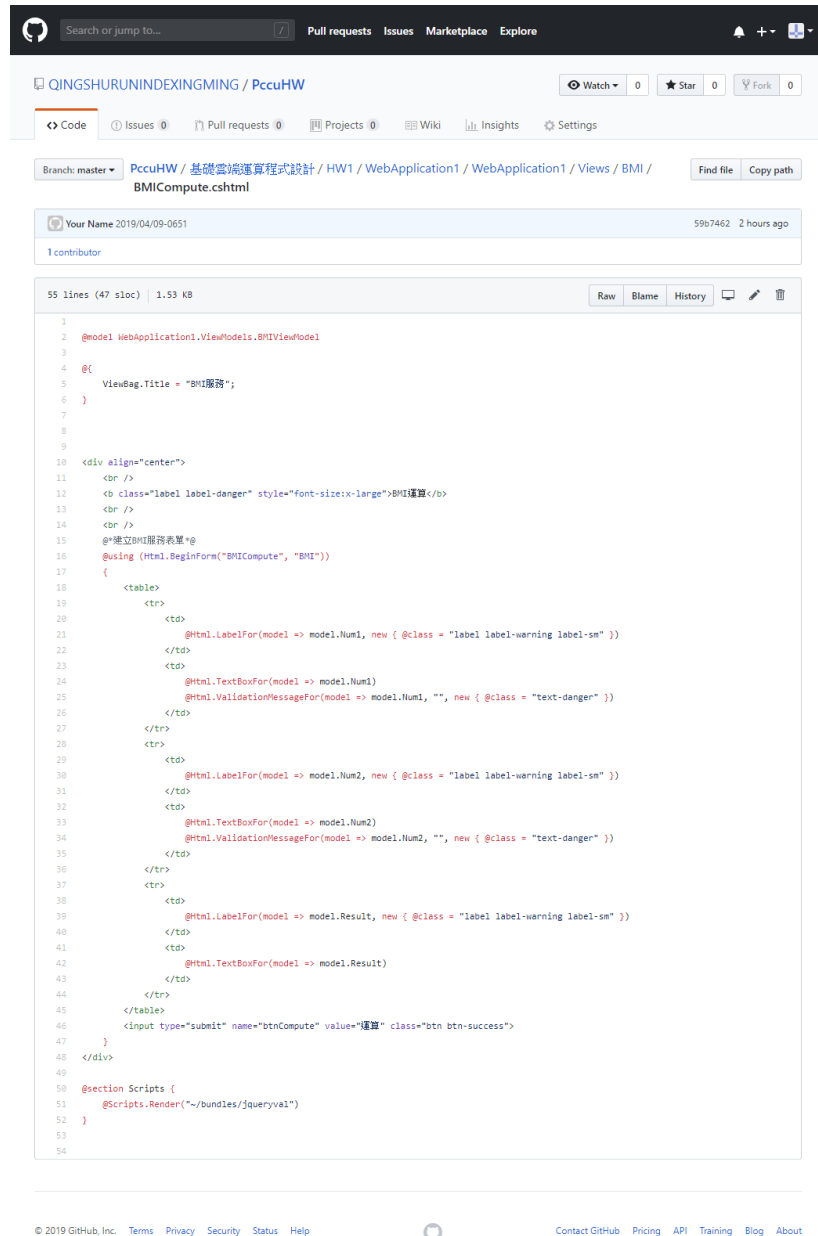
```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Web;
5
6 using System.ComponentModel;
7 using System.ComponentModel.DataAnnotations;
8
9 namespace WebApplication1.ViewModels
10 {
11     public class CarryViewModel
12     {
13         [DisplayName("十進位數字 : ")]
14         [Required(ErrorMessage = "該輸入十進位數字")]
15         public int Num { get; set; }
16
17         [DisplayName("二進位 : ")]
18         public string Result1 { get; set; }
19
20         [DisplayName("八進位 : ")]
21         public string Result2 { get; set; }
22
23         [DisplayName("十六進位 : ")]
24         public string Result3 { get; set; }
25     }
26 }
```

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圖表 8

Views

- BMI

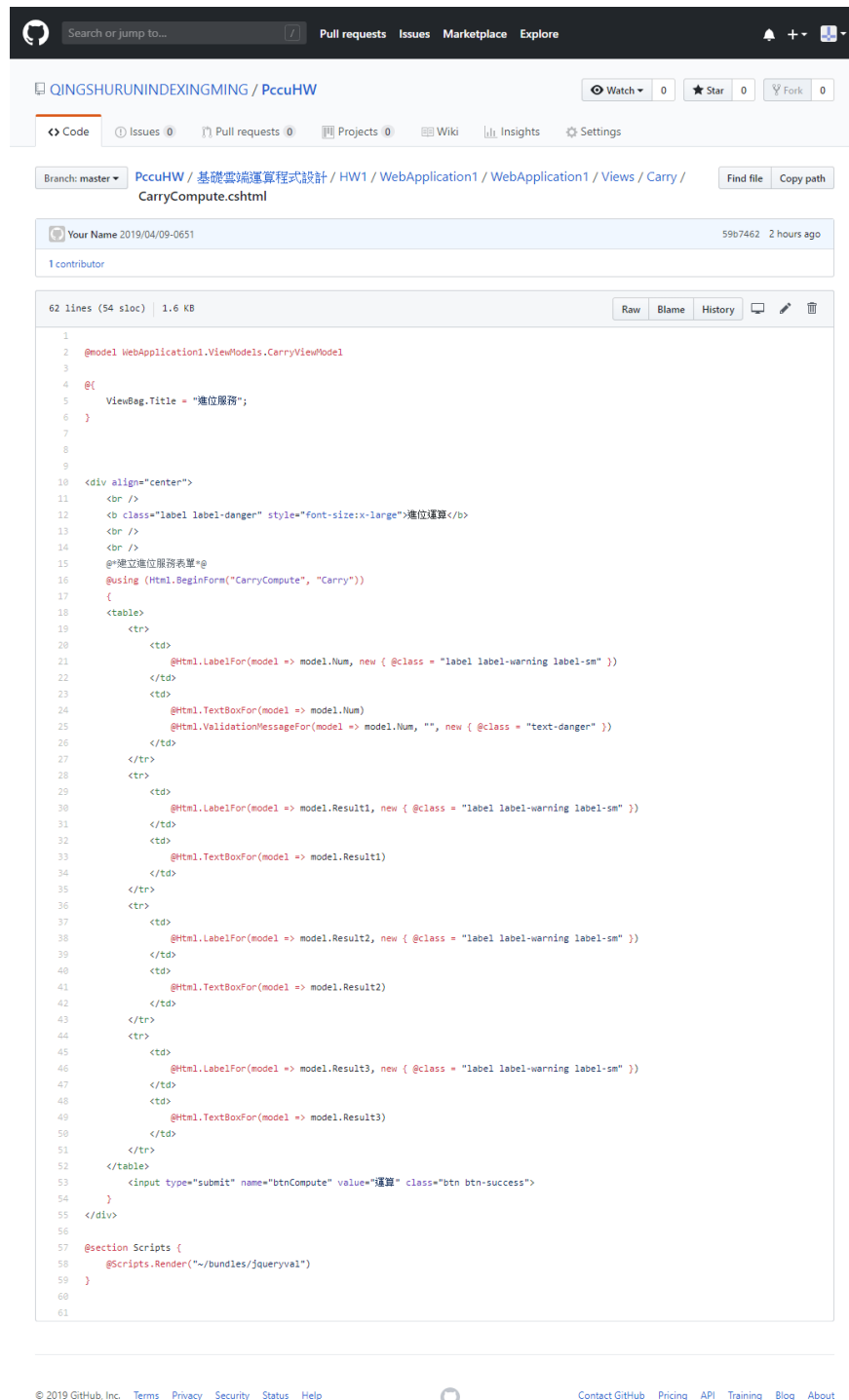


The screenshot shows a GitHub repository for 'QINGSHURUNINDEXINGMING / PccuHW'. The file 'BMICompute.cshtml' is selected, showing 55 lines of code. The code is a Razor view for a BMI calculator. It includes a model of type 'WebApplication1.ViewModels.BMIViewModel'. The view bag title is 'BMI服務'. The layout is centered. It contains two input fields for 'Num1' and 'Num2', each with a warning label and a validation message. A 'Compute' button is at the bottom. The code is as follows:

```
1
2 @model WebApplication1.ViewModels.BMIViewModel
3
4 @{
5     ViewBag.Title = "BMI服務";
6 }
7
8
9
10 <div align="center">
11     <br />
12     <div class="label label-danger" style="font-size:x-large">BMI運算</div>
13     <br />
14     <br />
15     @*建立BMI服務表單*@
16     @using (Html.BeginForm("BMICompute", "BMI"))
17     {
18         <table>
19             <tr>
20                 <td>
21                     @Html.LabelFor(model => model.Num1, new { @class = "label label-warning label-sm" })
22                 </td>
23                 <td>
24                     @Html.TextBoxFor(model => model.Num1)
25                     @Html.ValidationMessageFor(model => model.Num1, "", new { @class = "text-danger" })
26                 </td>
27             </tr>
28             <tr>
29                 <td>
30                     @Html.LabelFor(model => model.Num2, new { @class = "label label-warning label-sm" })
31                 </td>
32                 <td>
33                     @Html.TextBoxFor(model => model.Num2)
34                     @Html.ValidationMessageFor(model => model.Num2, "", new { @class = "text-danger" })
35                 </td>
36             </tr>
37             <tr>
38                 <td>
39                     @Html.LabelFor(model => model.Result, new { @class = "label label-warning label-sm" })
40                 </td>
41                 <td>
42                     @Html.TextBoxFor(model => model.Result)
43                 </td>
44             </tr>
45         </table>
46         <input type="submit" name="btnCompute" value="運算" class="btn btn-success">
47     }
48 </div>
49
50 @section Scripts {
51     @Scripts.Render("~/bundles/jqueryval")
52 }
53
54
```

圖表 9

● Carry



The screenshot shows a GitHub repository for 'QINGSHURUNINDEXINGMING / PccuHW'. The file 'CarryCompute.cshtml' is selected, showing its code. The code is a Razor view for a web application, featuring a table with columns for input numbers and their results. The code includes HTML tags for styling and Razor syntax for rendering data from a model. The repository has 0 pull requests, 0 issues, 0 projects, 0 wiki pages, 0 insights, and 0 settings. The file is 62 lines long, 54 sloc, and 1.6 KB. The code is as follows:

```
1
2 @model WebApplication1.Models.CarryViewModel
3
4 @{
5     ViewBag.Title = "進位服務";
6 }
7
8
9
10 <div align="center">
11     <br />
12     <b class="label label-danger" style="font-size:x-large">進位運算</b>
13     <br />
14     <br />
15     @*建立進位服務表單*@
16     @using (Html.BeginForm("CarryCompute", "Carry"))
17     {
18         <table>
19             <tr>
20                 <td>
21                     @Html.LabelFor(model => model.Num, new { @class = "label label-warning label-sm" })
22                 </td>
23                 <td>
24                     @Html.TextBoxFor(model => model.Num)
25                     @Html.ValidationMessageFor(model => model.Num, "", new { @class = "text-danger" })
26                 </td>
27             </tr>
28             <tr>
29                 <td>
30                     @Html.LabelFor(model => model.Result1, new { @class = "label label-warning label-sm" })
31                 </td>
32                 <td>
33                     @Html.TextBoxFor(model => model.Result1)
34                 </td>
35             </tr>
36             <tr>
37                 <td>
38                     @Html.LabelFor(model => model.Result2, new { @class = "label label-warning label-sm" })
39                 </td>
40                 <td>
41                     @Html.TextBoxFor(model => model.Result2)
42                 </td>
43             </tr>
44             <tr>
45                 <td>
46                     @Html.LabelFor(model => model.Result3, new { @class = "label label-warning label-sm" })
47                 </td>
48                 <td>
49                     @Html.TextBoxFor(model => model.Result3)
50                 </td>
51             </tr>
52         </table>
53         <input type="submit" name="btnCompute" value="運算" class="btn btn-success">
54     }
55 </div>
56
57 @section Scripts {
58     @Scripts.Render("~/bundles/jqueryval")
59 }
60
61
```

圖表 10

- Home

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Index.cshhtml

Your Name 2019/04/09-0651 59b7462 2 hours ago

1 contributor

13 lines (12 sloc) | 420 Bytes Raw Blame History

```
1 @{
2     ViewBag.Title = "網站首頁";
3 }
4
5 <div align="center">
6     <br />
7     <b class="label label-danger" style="font-size:x-large">網站首頁</b>
8     <br /> <br />
9     <h3>
10         @Html.ActionLink("BMI服務", "BMICompute", "BMI", null, new { @class = "btn btn-success btn-md" })
11         @Html.ActionLink("進位服務", "CarryCompute", "Carry", null, new { @class = "btn btn-success btn-md" })
12     </h3>
13 </div>
```

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圖表 11

● Shared



```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
5   <meta charset="utf-8" />
6   <meta name="viewport" content="width=device-width, initial-scale=1.0">
7   <title>@ViewBag.Title</title>
8   @Styles.Render("~/Content/css")
9   @Scripts.Render("~/bundles/modernizr")
10
11 <style>
12   .navbar {
13     background-color: pink !important;
14   }
15
16   .navbar .navbar-brand {
17     color: green !important;
18     font-size: 24px;
19     font-weight: bold;
20   }
21
22   .navbar li a {
23     color: #0000ff !important;
24     font-size: 20px;
25     font-weight: bold;
26   }
27
28   .navbar-nav li a:hover, .navbar-nav li.active a {
29     color: #ff4500 !important;
30     background-color: #fff !important;
31   }
32
33   .navbar-default .navbar-toggle {
34     border-color: transparent;
35     color: #fff !important;
36   }
37
38   .label-sm {
39     font-size: small;
40   }
41 </style>
42 </head>
43 <body>
44   <div class="navbar navbar-inverse navbar-fixed-top">
45     <div class="container">
46       <div class="navbar-header">
47         <button type="button" class="navbar-toggle" data-toggle="collapse" data-target=".navbar-collapse">
48           <span class="icon-bar"></span>
49           <span class="icon-bar"></span>
50           <span class="icon-bar"></span>
51         </button>
52         @Html.ActionLink("首頁", "Index", "Home", new { area = "" }, new { @class = "navbar-brand" })
53       </div>
54       <div class="navbar-collapse collapse">
55         <ul class="nav navbar-nav">
56           <li>@Html.ActionLink("首頁", "Index", "Home")</li>
57           <li>@Html.ActionLink("Web服務", "WebCompute", "Web")</li>
58           <li>@Html.ActionLink("數位服務", "CarryCompute", "Carry")</li>
59         </ul>
60       </div>
61     </div>
62   </div>
63   <div class="container body-content">
64     @RenderBody()
65   </div>
66
67   @Scripts.Render("~/bundles/jquery")
68   @Scripts.Render("~/bundles/bootstrap")
69   @RenderSection("scripts", required: false)
70 </body>
71 </html>
```

圖表 12



學習心得

希望能上手些

